AMENDMENTS TO THE CLAIMS

Please cancel claim 26 as shown below. Claims 19, 21-22, 36-66, previously withdrawn, are canceled herewith without prejudice. Claims 6, 23-25 have been previously canceled. All pending claims are reproduced below, including those that remain unchanged.

1. (Previously presented) A process to deposit a thin film on a device by chemical vapor deposition, comprising:

    a. exposing the device to a gaseous first reactant, wherein the first reactant deposits on the device to form a first layer that can be other than a monolayer;

    b. performing a plasma treatment on the deposited film;

    c. exposing the device, with the first layer deposited, to a gaseous second reactant under the plasma treatment to deposit a second layer; and

    d. repeating steps (a) through (c) until the thin film, comprising a plurality of layers, is deposited.

2. (Original) The process of claim 1, wherein the device is a wafer.

3. (Original) The process of claim 1, wherein the plasma treatment is capable of at least one of enhancing and maintaining at least one of conformality and density of the thin film.

4. (Original) The process of claim 1, wherein the plasma is a high density plasma with greater than 5 x 109 ion/cm3.

5. (Original) The process of claim 1, wherein at least one of the gaseous first reactant and the gaseous second reactant comprises a metal organic reactant.

6. (Canceled).

7. (Original) The process of claim 1, wherein one of the reactants comprises an organic reactant.

8. (Original) The process of claim 1, wherein the thin film comprises a metal film.

9. (Original) The process of claim 1, wherein the thin film is selected from the group consisting of a metal nitride film and a metal oxide film.

10. (Original) The process of claim 1, wherein exposing the device, with the first layer deposited, to the second reactant occurs under pressure above one hundred militorr (100 mT).

11. (Original) The process of claim 1, further comprising pressurizing the chamber to a pressure above one hundred militorr (100 mT).

12. (Original) The process of claim 11, wherein reacting the first reactant and second reactant creates a new compound.

13. (Original) The process of claim 1, wherein the thin film thickness is between a fraction of a nanometer and ten nanometers.

14. (Original) The process of claim 1 further comprising exciting the plasma with a solid state RF plasma source.

15. (Previously presented) The process of claim 14 wherein the process further comprises using a helical ribbon electrode as the solid state RF plasma source.

16. (Original) The process of claim 1, further comprising sequentially pulsing the plasma for each layer to be deposited.

17. (Previously presented) The process of claim 1, further comprising purging a chamber of the first reactant.

18. (Original) A process to deposit a thin film by chemical vapor deposition, comprising:

(a) pre-cleaning a surface of a device;

(b) evacuating a chamber of gases;

(c) exposing the device to a gaseous first reactant in the chamber, wherein the first reactant deposits on the device to form a layer having a thickness of other than a monolayer;

(d) evacuating the chamber of gases;

(e) striking a plasma;

(f) exposing the device, coated with the first reactant, to a gaseous second reactant under the plasma so that the layer deposited by the first reactant is treated; and

(g) repeating steps (c)-(f) until the thin film comprising a plurality of layers is deposited.

19. (Canceled)

20. (Original) A process to deposit a thin film including a plurality of layers on a device by chemical vapor deposition, the process comprising:

a. exposing the device to a gaseous first reactant, wherein the first reactant deposits on the device to form a layer;

b. exposing the device, coated with the first reactant, to a gaseous second reactant under a plasma treatment, wherein the plasma treatment is generated with a solid state RF plasma source having a helical ribbon electrode, and wherein the layer deposited by the first reactant is treated; and

c. repeating steps (a)-(b) until the thin film comprising a plurality of layers is deposited.

21-26. (Canceled)

27. (Original) A method for processing a thin film onto a semiconductor wafer, the method comprising:

exposing a wafer in a chamber with a first gaseous reactant;

coating the wafer with the first reactant so that a first coat of the first reactant is greater than one monolayer in thickness;

evacuating the chamber;

exposing the coated wafer to a gaseous second reactant as a plasma; and

forming a second coat over the first coat, the second coat being greater than one monolayer in thickness.

28. (Original) The method as in claim 27 wherein the method further comprises successively adding at least one additional coat by repeating the evacuating step, the second exposing step, and the forming step.

29. (Original) The method as in claim 27 wherein the method further comprises exciting the plasma with a solid state RF plasma source functionally associated with the chamber.

30. (Original) The method as in claim 27 wherein the exciting step uses a helical ribbon electrode, as the solid state RF plasma source.

31. (Original) The method as in claim 27, wherein the plasma has a density higher than 5 x 109 ion/cm3.

32. (Original) The method as in claim 27 wherein the method further comprises performing the second exposing step under pressure above 100 mT.

33. (Original) The method as in claim 27 wherein the second exposing step and subsequent forming step further comprise reacting the first coat of the first reactant with the second coat of the second reactant to form a different chemical product.

34. (Original) The method as in claim 27 wherein the method is unaffected by self-limiting surface reactions of the first coat and second coat.

35. (Original) The method as in claim 28 wherein the method is unaffected by self-limiting surface reactions of the first coat, the second coat, and the at least one additional coat.

36-66. (Canceled).